

## REMARKS

Examiner I. B. Patel is thanked for the thorough Search and Examination of the Subject Application for Patent.

Proposed amendments to Figs. 2 and 5-8 are indicated in red on the attached copies of Figs. 2 and 5-8. The marked up copies of Figs. 2 and 5-8 are on pages 10 and 11 of this Office Action Response. These changes to Figs. 2 and 5-8 add appropriate cross hatching to the drawings for the flexible tape and the encapsulation material, as required by the Examiner.

The Specification has been amended to correct a typographical error on page 10, line 14 and page 11, line 1 to replace "encapsulant using" to -- encapsulant 42 using --. It is clear from Figs. 7 and 8 that reference number 42 refers to the encapsulant used to encapsulate the circuit die 30 and gold wire 32; see Figs. 7 and 8 of the Drawings; page 10, lines 12-14 of the Specification; and page 10 line 21 to page 11, line 1 of the Specification.

Claim 11 has been amended to include the limitation that the molded stiffeners are removable. The basis for this amendment to Claim 11 can be found in the Specification on page 4, lines 19-21 and page 9, lines 16-25.



Reconsideration of the Objection to the Drawings is requested. Proposed amendments to Figs. 2 and 5-8 are indicated in red on the attached copies of Figs. 2 and 5-8. The marked up copies of Figs. 2 and 5-8 are on pages 10 and 11 of this Office Action Response. These changes add appropriate cross hatching for the flexible tape, reference number 10, and encapsulation material; reference number 12 in Figs. 2 and 5, reference number 18 in Fig. 6, and reference number 42 in Figs. 7-8. Cross hatching was not added to the prior art stiffener 14 in Fig. 2, the solder mask 38 in Fig. 7, nor the solder mask 39 in Fig. 8 because the material forming these items is not specified. It is requested that actual changes to the Drawings be held in abeyance until allowance of the claims has been determined.

Reconsideration of the Rejection of Claims 11-16 under 35 U.S.C 103(a) as being unpatentable over Davies et al., U.S. Pat. No. 5,901,041, in view of Johnson, U.S. Pat. No. 5,888,849, is requested. Claims 11-16 describe a molded flexible circuit assembly having a flexible tape; a number of circuit die attached to said flexible tape; a number of encapsulation units formed of molded encapsulation material, wherein each of said circuit die is covered by one of said encapsulation units; and a number of removable molded stiffeners formed of said molded encapsulation material. As indicated by the Examiner, Davies et al. describes a flexible tape; a circuit die attached to said flexible tape; and an encapsulation unit formed of molded encapsulation material, wherein said circuit die is covered by said encapsulation unit. As indicated by the Examiner Davies et al. describe only a single circuit die and a single encapsulation unit.

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The key differences between the molded flexible circuit assembly described by Claims 11-16 and Davies et al. are as follows. Claims 11-16 describe "a number of circuit die attached to said flexible tape and a number of encapsulation units formed of molded encapsulation material, wherein each of said circuit die is covered by one of said encapsulation units" whereas Davies et al. describe only a single circuit die and a single encapsulation unit. Claims 11-16 describe "a number of removable molded stiffeners formed of said molded encapsulation material" whereas Davies et al. do not describe molded stiffeners.

The Examiner has argued that the lower molded body 24 described by Davies et al.; Figs. 1-2 and column 3, lines 46-60; serves the function of a molded stiffener. We respectfully disagree that the lower molded body is the same as the molded stiffeners described in Claims 11-16. The lower molded body of Davies et al. is part of the encapsulation unit while the molded stiffeners described by Claims 11-16 are separate from the encapsulation units. In addition Claims 11-16, as amended, describe removable molded stiffeners. The lower molded body of Davies et al. is a necessary part of the encapsulation and is not removable. It is believed that the "number of removable molded stiffeners formed of said molded encapsulation material" described in Claims 11-16 are different from and not obvious from Davies et al.

The Examiner has argued that the invention of Johnson makes "a number of circuit die attached to said flexible tape and a number of encapsulation units formed of molded encapsulation material, wherein each of said circuit die is covered by one of said encapsulation units" described in Claims 11-16 an obvious extension of Davies et al. We respectfully disagree. Johnson describes a circuit assembly containing only a single circuit die; see Figs. 4-6 and column 3, lines 9-41. Since Johnson describes only a single circuit die the invention of Johnson does not make "a number of circuit die attached to said flexible tape and a number of encapsulation units formed of molded encapsulation material, wherein each of said circuit die is covered by one of said encapsulation units" as described in Claims 11-16 an obvious extension of Davies et al.

It is believed that Claims 11-16, as amended, distinguish patentably from Davies et al. in view of Johnson. Reconsideration of the Rejection of Claims 11-16 under 35 U.S.C 103(a) as being unpatentable over Davies et al. in view of Johnson, and allowance of Claims 11-16, are requested.

It is believed that the prior art made of record and not relied upon does not affect the patentability of Claims 11-16.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

It is requested that should Examiner Patel not find that the Claims are now Allowable that the Examiner call the undersigned Agent at (845)-462-5363 to overcome any problems preventing allowance.

Respectfully submitted,

A handwritten signature in cursive script, reading "Larry J. Prescott". The signature is written in dark ink and is positioned above the printed name.

Larry J. Prescott, Reg. No. 39,335

VERSION WITH MARKINGS TO SHOW CHANGES MADE

## In the Specification:

On page 10, line 14 please replace "encapsulant using" with -- encapsulant  
42 using --.

On page 11, line 1 please replace "encapsulant using" with -- encapsulant  
42 using --.

## In the Claims:

Please rewrite Claim 11 as follows.

11. (ONCE AMENDED) A molded flexible circuit assembly, comprising:

a flexible tape;

a number of circuit die attached to said flexible tape;

a number of encapsulation units formed of molded encapsulation material,

wherein each of said circuit die is covered by one of said encapsulation units; and

a number of removable molded stiffeners formed of said molded encapsulation  
material.